

# Dare to Create



Institut Fédératif de Recherche

# RESSOURCES MARINES

General presentation

# L'IFR RM, a Université Côte d'Azur Institute



- 1 University
- 4 Components
- 5 National Research Centers
- 6 Associated institutes
- 19 campuses
- 50 Research laboratories

**EDUCATION - RESEARCH – INNOVATION**  
*Interdisciplinarity & Science with Society*

# What's the Federative Institute for Research on Marine Ressources (IFR RM) ?

A dynamic network that brings Université Côte d'Azur's interdisciplinary and marine scientific community together

## Missions

- To unite and make the marine community more dynamic and cohesive
- To promote cross-cutting, interdisciplinary and innovative research
- To raise the profile and visibility of research undertaken within the network among stakeholders at the local, national and international levels



Biology



Chemistry



Health



Environnement



Ecology



Conservation



Law



Economy



SHS



Geosciences



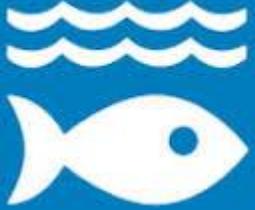
Modelling / AI



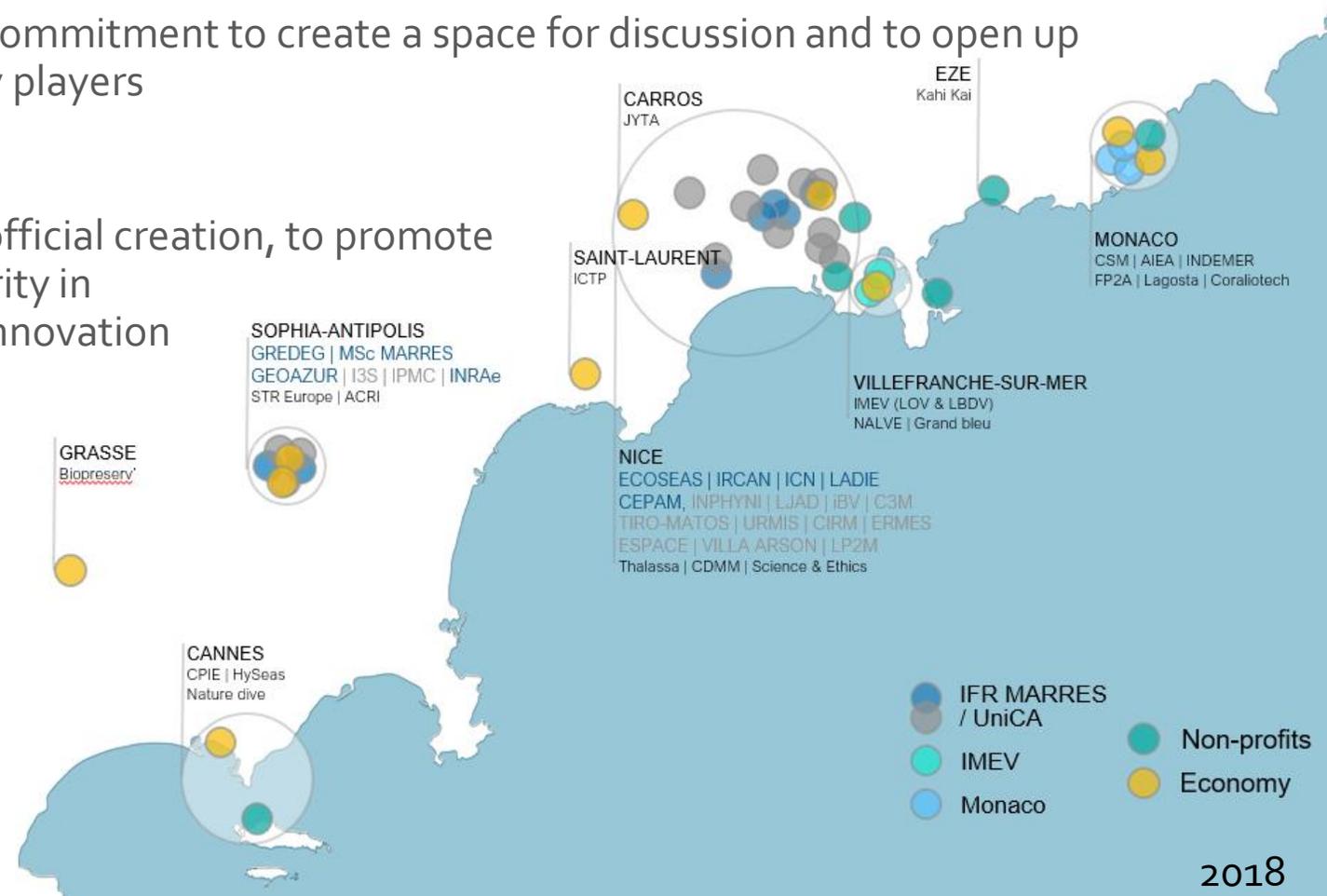
Archeology

# IFR RM's context of emergence

14 LIFE BELOW WATER



- Existing dynamic in the area regarding Marine Resources and Environment: Training and Education, Research and Innovation, Socio-economic and public stakeholders
- Since 2018: a commitment to create a space for discussion and to open up on existing key players
- 2020: IFR RM official creation, to promote interdisciplinarity in research and innovation



# Key moments: from a first idea to implementation

## 2018-2019 Idea of emergence

- A will to create a space for exchange to foster interdisciplinary
- Research and innovation through interdisciplinary collaboration
- Initial discussions with the governance

## 2020-2024 Development

- 2020 : IFR RM official creation
- 2021 : 1st Annual Seminar (visio)
- 2023 : 2d Annual Seminar



## 2025-2029 Deployment

- June 2025 : IFR RM at UNOC<sub>3</sub> (Nice)
- November 2025: 3rd Annual Seminar
- December 2025: New management team



# The marine community at UniCA: Key figures

## RESEARCH

**+ than 150**

Scientists from diverse disciplines work on marine resources or related topics in nearly 20 research laboratories

**+ than 20**

Large-scale projects involving several laboratories and disciplines

## INNOVATION

**6**

Innovative startups such as :



**1**

Marine Innovation Network within PUI MED' INNOV



## EDUCATION

*at the crossroads of research*

Doctoral theses related to marine resources and other topics within IFR RM

7 Master's programs related to sustainable development, including:

**2**

Specifically on Ocean issues

**Master in Law (Sea)**



**MSc. MARRES**  
science | conservation | valorization  
of marine resources  
by Université Côte d'Azur

## SOCIETY

- Science communication tools created
- Research platforms, technical facilities, equipment and expertise



# Board of Directors

*A multidisciplinary team serving the community*



**Director : Cécile Sabourault**  
Director of ECOSEAS Laboratory  
Marine ecology



**Dep. Dir. : Nathalie Lazaric**  
GREDEG Laboratory  
Economy



**Dep. Dir. : Jean-Christophe Martin**  
Director of IdPD / LADIE laboratory  
International Law



**Dep. Dir. : Mohamed Mehiri**  
ICN laboratory  
Chemistry

Deep roots and a desire to develop strong links at different levels

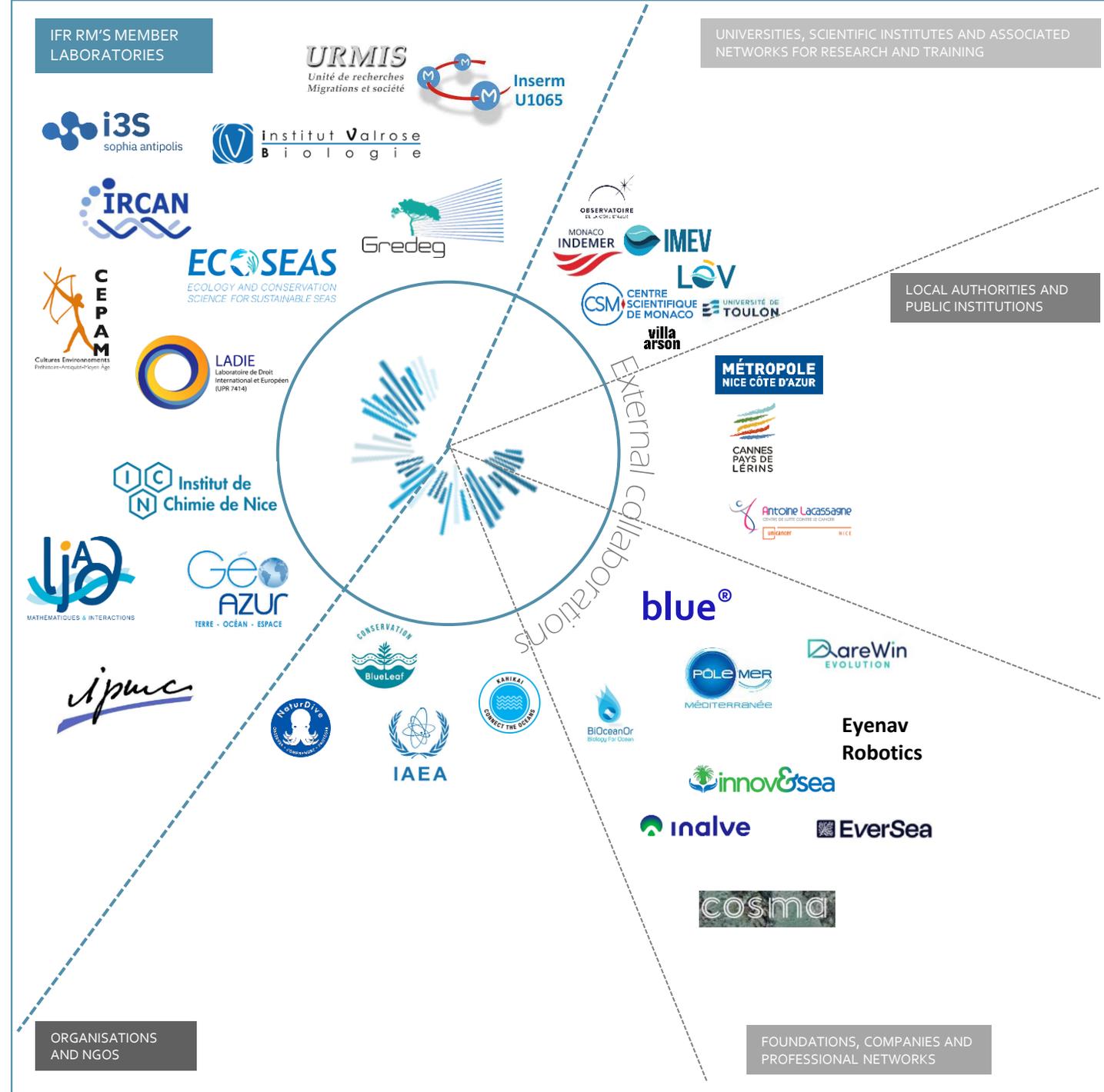


# IFR RM's ecosystem

At a local level

At a national level

At an international level



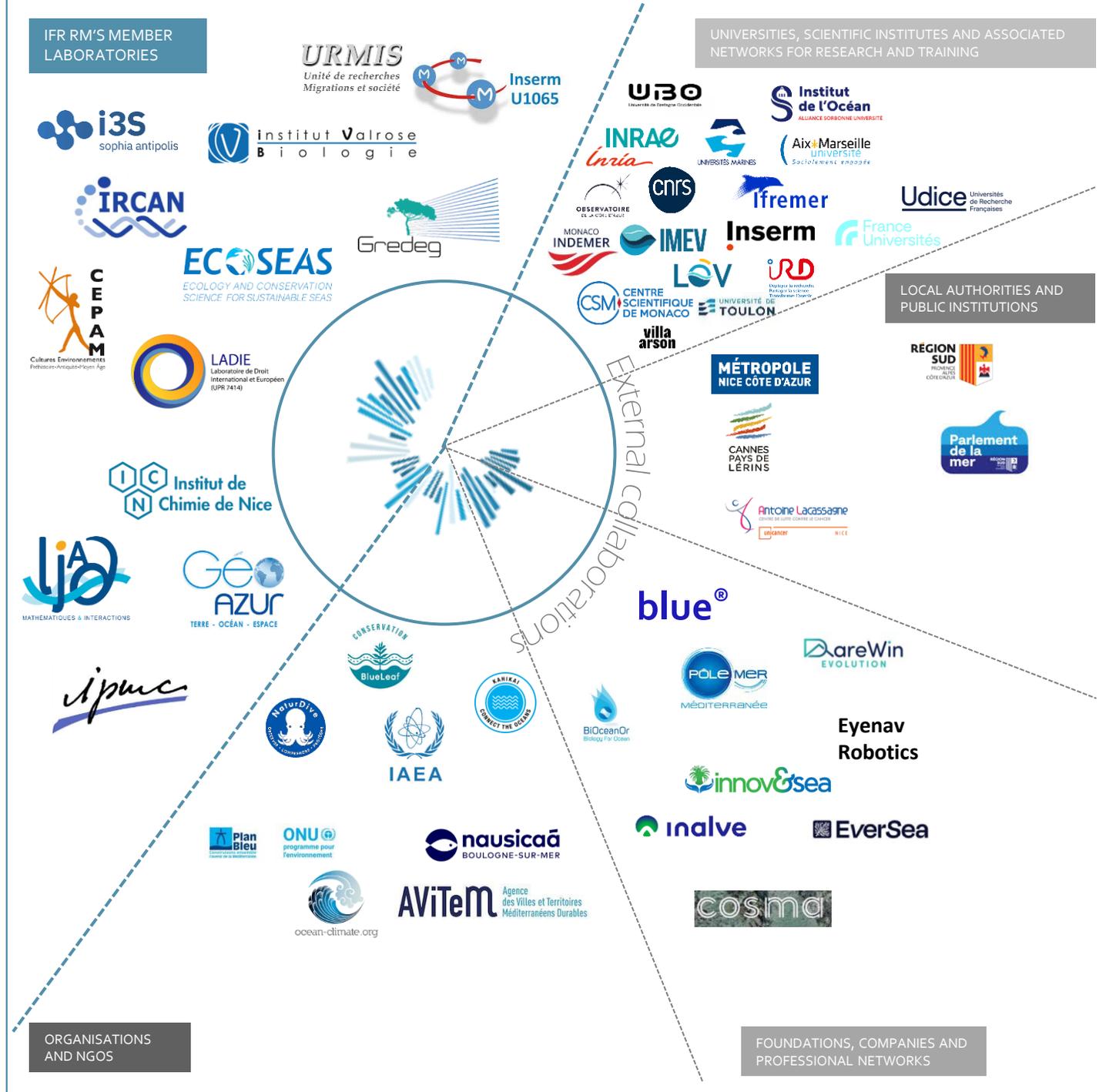
\* Simplified and non-exhaustive view of IFR RM interactions

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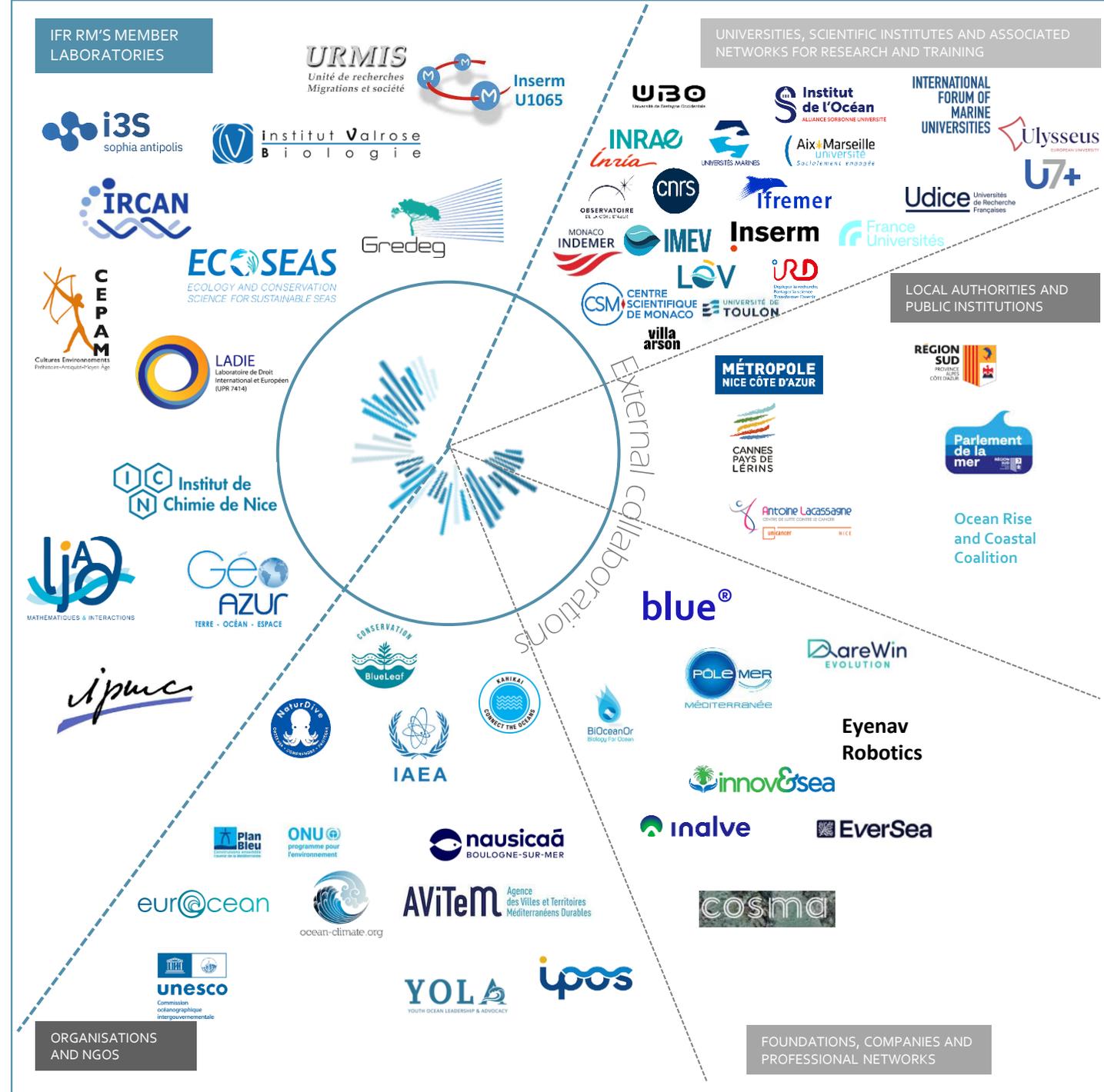
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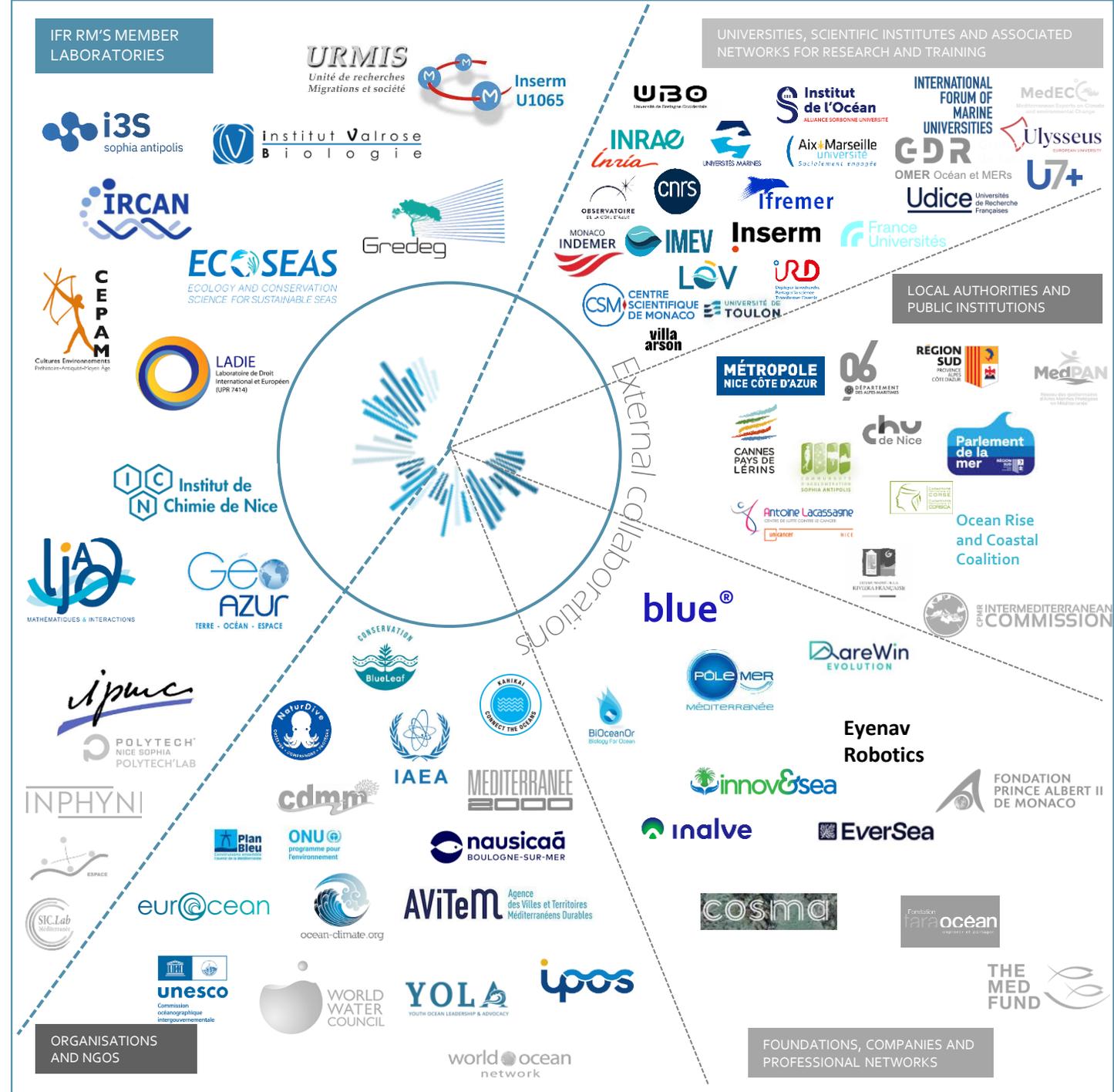
# IFR RM's ecosystem

At a local level

At a national level

At an international level

And much potential for new collaborations ...



\* Simplified and non-exhaustive view of IFR RM interactions

# Example of a Research Project



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## CORA(i)L : Revisiting coral health monitoring: from AI-based image recognition to next-generation reef monitoring

- **Partners** : IRCAN, MSI, ITCA, URMIS and international partners
- **Disciplines** : Computer science and artificial intelligence, Biology, ecology, conservation, sociology, etc.
- **PhD** : Romane Deshuraud
- **Potential of innovation** : new approach to monitoring coral health, new restoration and conservation tools

### More information



# Example of territorial collaboration

## A Marine Protected Area around Nice

- **Disciplines involved:** ecology, chemistry, economics, artificial intelligence, law, geography, sociology
- **Cooperation with diverse stakeholders:** local authorities, associations, scientists, etc.



# Example of international actions



- Scientific diplomacy: Implementing the institution's strategy in marine-related activities
- Engagement in multilateral exchanges for improved ocean governance
  - Participation to UNOC3 and co-creation of the International Network of Marine Universities (IFMU)
  - Upcoming Cop1 BBNJ
- Representation in key multilateral dialogue forums on marine issues
  - Member of two organizations bridging the gap between scientific knowledge and political decision-making



READ THE  
FOUNDING  
DECLARATION

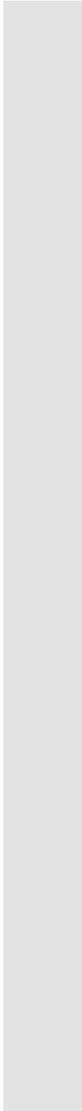


OCEAN & CLIMATE  
PLATFORM



# Member laboratories

Presentation of a few labs



- **Research areas:**

Geodynamics and tectonic deformation of the Earth's active zones; Seafloor and water column imaging; Seismic hazard monitoring; Impacts on seafloor chemistry and biodiversity

- **Projects**

**Synergy Harvest** (ERC) : Fertilization of ocean photosynthesis and hydrothermal iron

**Marmor** (PiA3) : National underwater instrumentation park

**Amorgos** (ANR) : Identification of the fault responsible for the largest earthquake in the Mediterranean

- **Platforms or equipment**

National park of marine acoustic instruments (seismometers, hydrophones, fiber optics, submerged sensor platforms) ; Bathymetric, seismic, and simological databases

- **Skills and technical expertise**

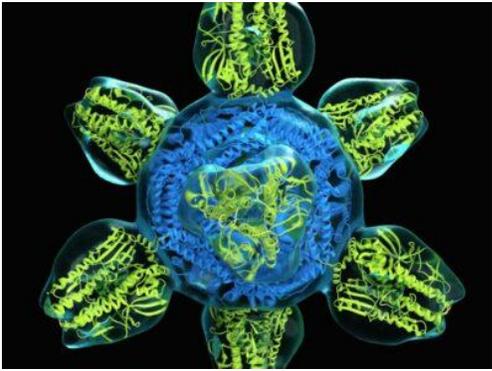
Acoustic signal processing in underwater imaging; Acquisition and monitoring of seismic and tsunami activity in high-risk areas (eg. Nice Airport)

- **Contact :** Boris Marcaillou, Director



# IPMC laboratory Institute of Molecular and Cellular Pharmacology

*Pharmacology, physiology, pathophysiology, functional genomics*



- **Research areas**

Treatments for diseases based on compounds of marine origin; biological membranes and pharmacology; epigenetics

- **Projects**

Wastewater epidemiology  
Pathophysiology of diseases and pain  
Lipid function and metabolism

- **Platforms or equipment**

IbiSA-certified platforms (imaging, genomics, proteomics); small animal production and functional exploration service

- **Skills and technical expertise**

Molecular biology; biochemistry; cell culture; electrophysiology

- **Contact :** Florian Lesage, Director,

[lesage@ipmc.cnrs.fr](mailto:lesage@ipmc.cnrs.fr)



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[www.ipmc.cnrs.fr](http://www.ipmc.cnrs.fr)

# IRCAN laboratory

## Cancer and Aging Research Institute Nice

*Human health and aging; longevity of organisms*



- **Research areas**

Valorization of marine resources for human health; monitoring of corals for stress response analysis and longevity mechanisms; coral reef health

- **Projects**

**Telotherm (ANR)** : Connection of telomeres to thermal effects in cnidarians and impacts on the organism

**Renew (ANR)** : Determination of regulatory networks triggered by injury to initiate a regenerative response in the human body

**Cora(i)l (Académie 3)** : Effects of climate change on coral health and preservation

- **Platforms and equipment**

Marine invertebrate platforms for ageing research (ANTIAGE) ; genomics (GENOMED) ; confocal and atomic force microscopy (PICMI) ; flow cytometry (CYTOMED) ; spheroid screening (AD-HUB)

- **Skills and technical expertise**

Molecular biology, cnidarian culture and experimentation, functional genomics

- **Contact** : Eric Röttinger, [eric.rottinger@univ-cotedazur.fr](mailto:eric.rottinger@univ-cotedazur.fr)



# CEPAM Laboratory

Archeology, paleoecology, pressions climatiques et anthropiques



- **Research areas**

Archaeological remains of invertebrate fish; evolution of marine ecosystems; human exploitation; long-term interactions between past human societies and environments; evolution of coastal/island landscapes

- **Projects and activities**

**Research group MERS** (Ecosystems, Resources, Societies)

**ERC MERMAID** : Marine Ecosystems, Animal Resources and Human Strategies in Ancient Mediterranean: Integrated Studies on Natural and Societal Resilience

- **Platforms and equipment**

Microscopy suites (MED, digital, paleobotanical, metallographic, stereomicroscopes, etc.), reference collections of modern fish and marine invertebrate skeletons, biomolecular/organic chemistry analysis suite, sediment preparation

- **Skills and technical expertise**

Identification of fish and shellfish bone remains, biometric/osteometric and paleoenvironmental reconstruction, seasonality

- **Contact** : Tatiana Theodoropoulou, [tatiana.theodoropoulou@cnrs.fr](mailto:tatiana.theodoropoulou@cnrs.fr)



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<https://cepam.cnrs.fr/>

# GREDEG laboratory

## Research group in Law, Economics and Management

*Analyses of the dynamics of innovation, regulation and governance of economic systems*



- **Research areas**

Governance, coastal environmental law, the ocean and commons, new forms of consumption, port decarbonization, blue economy, sustainability of coastal activities and maritime public policies

- **Projects and activities**

**Women's Employment and Gender Dynamics in the MENA Blue Economy: A Comparative Analysis (2025)**

**PROoF: PROtection of marine forests from herbivorous Fishes**

UN OCEAN CONFERENCE (10 juin 2025): Preserving, Funding and Restoring the Oceans (Nathalie Lazaric and Lena Gipperth University of Gothenburg, Sweden)

- **Platforms and equipment**

Databases (economic and legal data on maritime activities), analytical tools (economic and legal modeling to assess impacts of policies)

- **Skills and technical expertise**

Economic analysis of maritime public policies, comparative law expertise, consulting on strategies or innovation for maritime stakeholders

- **Contact :** Nathalie Lazaric, [nathalie.lazaric@univ-cotedazur.fr](mailto:nathalie.lazaric@univ-cotedazur.fr)



<https://gredeg.univ-cotedazur.fr/>



## Contact



[Website](#)



[Email](#)



[LinkedIn](#)

Costal areas

Climate change

Mineral resources

Biotechnologies

# Thank you for your attention



Ecosystems  
diversity

Sustainable fisheries

Decarbonization of  
marine transport

Marine  
contamination

Invasive alien species



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